

REMARKS

Status of Claims:

Claims 5 and 16 remain cancelled. New claims 25-27 are added. Thus, claims 1-4, 6-15, and 17-27 are present for examination.

Communications:

The Examiner marked box 1 of the Office Action Summary, which states that the Office Action is responsive to communications filed on 13 September 2004.

According to applicant's records, the last communication sent to the Patent and Trademark Office by applicant with respect to the present application was filed on 09 July 2004. Applicant requests clarification from the Examiner as to the contents of the communication filed on 13 September 2004.

Objection to the Specification, Drawings, and Claims:

The disclosure (including drawings and claims) is objected to because of informalities. The Examiner stated that "[i]t is appears that the term 'lake circuit' is used by the disclosure to mean 'level measurement circuit' and 'combination circuit' for rake receiver, while the accepted meaning is 'rake level measurement circuit' or 'rake combination circuit.'"

The Examiner suggested changing "lake circuit" to "rake circuit", "rake level measurement circuit", or "rake combination circuit."

The specification, drawings (FIG. 1, 2, and 8), and claims have been amended according to the Examiner's suggestion.

A substitute specification is submitted for the Examiner's consideration. The substitute specification includes the changes made by the present amendment and also includes all of the changes to the specification that have been made by previous amendments.

Amendments to the Drawings:

The drawing sheets attached in connection with the above-identified application containing Figures 1, 2, 5A, and 8 are being presented as new formal drawing sheets to be substituted for the previously submitted drawing sheets containing Figures 1, 2, 5A, and 8. The drawing Figures 1, 2, 5A, and 8 have been amended.

The specific change which has been made to Figure 1 is that "LAKE CCT." has been relabeled as "RAKE CCT.".

The specific change which has been made to Figure 2 is that "LAKE CCT." has been relabeled as "RAKE CCT.".

The specific change which has been made to Figure 5A is that the text in the decision box for step S3 has been changed.

The specific change which has been made to Figure 8 is that "LAKE CCT." has been relabeled as "RAKE CCT.".

Drawings:

Figures 1, 2, and 8 have been amended as discussed above.

In addition, drawing figure 5A has been amended. Specifically, the text in the decision box for step S3 has been changed. The text has been amended to make it clear that the correlated received signal difference of each transmission path is computed by the “path” level judging circuit. Also, the text has been amended to make it clear that the decision is based on whether or not the computed result is “above” the threshold value T_p . Support for the amendments to Figure 5A can be found in the original specification at page 12, lines 3-16.

Indefiniteness Rejection:

Claims 9-11 and 20-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 9-11 and 20-22, as amended, the rejection is respectfully traversed.

Claims 9 and 20 have been amended to make it clear that the computing of the power level in a pilot symbol part of each slot in one frame is performed by a level measuring circuit, and that the frames come from each output of the plurality of outputs from the finger circuit elements.

Claims 10 and 21 have been amended to make it clear that the differences are between (1) a maximum level of electric field levels from among said plurality of outputs from the finger circuit elements and (2) an electric field level of each of said plurality of outputs from the finger circuit elements.

Claims 11 and 22 have been amended to clarify the recitation of a limitation.

Therefore, claims 9-11 and 20-22, as amended, are believed to comply with the requirements of 35 U.S.C. 112, second paragraph.

Prior Art and Obviousness Rejections:

Claims 1-4, 8, 11-15, 19, and 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Sudo et al. (U.S. Patent Number 6,625,202)(hereinafter Sudo).

Claims 6, 7, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sudo in view of Ishikura (U.S. Patent Number 5,239,684).

With respect to claims 1-4, 6-8, 11-15, 17-19, and 22-24, as amended, the rejections are respectfully traversed.

Independent claim 1, as amended, recites a receiving terminal for a CDMA system, comprising:

“a finger circuit having a plurality of finger circuit elements for making a correlation between a received signal from a radio circuit connected to an antenna and a known signal, and feeding out a plurality of outputs from the finger circuit elements as a correlated received signal; and

a rake circuit for combining the plurality of outputs from the finger circuit elements;

wherein the rake circuit includes a level judgment circuit for executing electric field level judgment based on the correlated received signal from the finger circuit and a predetermined threshold level; and

wherein an operation of at least one finger circuit element can be suspended for a fixed, predetermined time period according to the result of the electric field level judgment.” (Emphasis Added).

A receiving terminal for a CDMA system including the above-quoted features has the advantage that an operation of at least one finger circuit element can be suspended for a fixed, predetermined time period according to the result of an electric field judgment. By suspending the operation of at least one finger circuit element, power consumption of the receiving terminal can be reduced as compared with prior art receiving terminals. (Original Specification; page 14, line 23 – page 15, line 7).

Sudo neither discloses nor suggests a receiving terminal for a CDMA system including the above-quoted features where an operation of at least one finger circuit element

can be suspended for a fixed, predetermined time period according to the result of an electric field judgment. In Sudo, a received signal S1 from a receiving antenna 1 is passed through a dielectric filter 3, an amplifier (LNA) 4, and a SAW filter 5. (Sudo; FIG. 4). In addition, a received signal S2 from a receiving antenna 6 is passed through a dielectric filter 7, an amplifier (LNA) 8, and a SAW filter 9. (Sudo; FIG. 4). The resulting signals for S1 and S2 are then combined in combiner 10 and the combined signal is passed through IF receiving circuit 11 and then through rake receiving circuit 12D. (Sudo; FIG. 4). In the rake receiving circuit 12D, the combined signal is input to the finger circuits 1207-1209. (Sudo; FIG. 3).

The device in Sudo can control the power supply to the LNA 8 connected to the antenna 6. (Sudo; FIG. 4; column 8, lines 17-18). Thus, the device in Sudo can stop the amplification of the signal S2. However, the device in Sudo cannot control the power supply to the LNA 4 connected to the antenna 1. (Sudo; FIG. 4). Thus, the signal S1 is always amplified by the LNA 4. Therefore, even if the LNA 8 is turned off and the signal S2 is not amplified, the LNA 4 will still amplify the signal S1, and the combiner 10 will at least have as output the amplified signal S1 after being passed through the SAW filter 5. The combined signal from the combiner 10 will then pass through the IF receiving circuit 11 and be input to the finger circuits 1207-1209 of the rake receiving circuit 12D. (Sudo; FIG. 3; FIG. 4). Thus, even if the power to the LNA 8 is turned off, operations of the finger circuits 1207-1209 are not suspended, because there is still a signal input to the finger circuits that comes from the antenna 1 and is amplified by LNA 4. (Sudo; FIG. 3; FIG. 4).

The Examiner appears to treat the LNA 8 of Sudo as a finger circuit element. However, the LNA 8 of Sudo is an amplifier for a signal from one antenna, and is not a finger circuit element for making a correlation between a received signal and a known signal. Sudo neither discloses nor suggests suspending an operation of the finger circuits 1207-1209.

Therefore, independent claim 1, as amended, is neither disclosed nor suggested by the cited prior art and, hence, is believed to be allowable.

Independent claim 11, as amended, recites a receiving terminal for a CDMA system similar to the receiving terminal for a CDMA system of claim 1 and, thus, is believed to be allowable for at least the same reasons claim 1 is believed to be allowable.

Independent claim 12, as amended, recites a receiver for a CDMA system similar to the receiving terminal for a CDMA system of claim 1 and, thus, is believed to be allowable for at least the same reasons claim 1 is believed to be allowable.

Independent claim 22, as amended, recites a receiver for a CDMA system similar to the receiving terminal for a CDMA system of claim 1 and, thus, is believed to be allowable for at least the same reasons claim 1 is believed to be allowable.

Independent claim 23, as amended, recites a receiving method for a CDMA system similar to an operation of the receiving terminal for a CDMA system of claim 1 and, thus, is believed to be allowable for at least the same reasons claim 1 is believed to be allowable.

Independent claim 24, as amended, recites a receiving method for a CDMA system similar to an operation of the receiving terminal for a CDMA system of claim 1 and, thus, is believed to be allowable for at least the same reasons claim 1 is believed to be allowable.

The dependent claims are deemed allowable for at least the same reasons indicated above with regard to the independent claims from which they depend.

Conclusion:

The application is now considered to be in condition for allowance and an early indication of same is earnestly solicited.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or

even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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